

REMARKS

I. Introduction

In response to the Office Action dated March 19, 2004, claims 6-8, 20-22, and 34-36 have been cancelled, claims 1, 15, 29-33, and 37-42 have been amended, and claims 43-51 have been added. Claims 1-5, 9-21, 23-33, and 37-51 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Objections to the Specification

Various objections were made to the specification. The objections were primarily based on the use of place markers in the originally filed application for serial numbers of related applications. Applicant has amended the appropriate paragraphs as requested.

However, the Office Action also objected to the use of attorney's docket number in the related application section. Applicant notes that there is no MPEP section or rationale for which such objections may be based. Nonetheless, to expedite prosecution, Applicant has removed the reference to the attorney's docket number as requested.

III. Office Action Subject Matter Rejection

In paragraphs (5)-(6), the Office Action rejects claims 1-42 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In paragraphs (7)-(8) of the Office Action, claims 1-42 were rejected under 35 U.S.C. §112, first paragraph. Specifically, the independent claims were rejected to based on the preamble of the claims. While Applicant disagrees with the rejections, the claims have been amended.

Original claim 1 provided a method for refining an approximate device location in a computer system. In other words, an approximate location of a device was refined using a computer system. Such language is clearly statutory. Nonetheless, to expedite prosecution, the claim has been amended.

Original claim 15 provided an apparatus for refining an approximate device location in a computer system. Similar to original claim 1, an apparatus in a computer system was used to refine a approximate location of a device. Such language as originally filed is therefore patentable. Nonetheless, to expedite prosecution, the claim has been amended.

Original claim 29 recited an article of manufacture that embodied logic. Such language is clearly within the realm of patentable subject matter. In fact, MPEP 2107.01 provides that an invention that is not a machine, an article of manufacture, a composition or a process cannot be patented and refers to *Diamond v. Chakerabarty* and *Diamond v. Diehr*. Nonetheless, to expedite prosecution, Applicant has amended claim 29 to recite a program storage device.

In view of the above, Applicant submits that the claims currently describe statutory subject matter. Should issues still remain in this regard, the Applicant requests that the Examiner indicate how the rejection can be overcome and how problems may be resolved, in accordance with the directives of the Examination Guidelines for Computer-Related Inventions. See Guidelines II M.P.E.P. § 2106. Specifically, should it be necessary, the Applicant requests that the Examiner identify features of the invention that would render the claimed subject matter statutory if recited in the claim. See Guidelines IV, M.P.E.P. § 2106.

Further, since the 35 USC §112 rejection was based on the rejection under 35 USC §101, Applicant submits that the rejections under §112 have been similarly resolved.

IV. Prior Art Rejections

In paragraphs (5)-(6) of the Office Action, claims 1-42 were rejected under 35 U.S.C. §102(c) as being anticipated by LeBlanc et al., U.S. Patent No. 6,236,365 (LeBlanc).

Applicant respectfully traverses this rejection.

Specifically, claims 1, 15, and 29 were rejected as follows:

Claims 1, 15, 29:

LeBlanc anticipates determining an approximate location of a device (LeBlanc, c 3, I 37-40); reading a rule base that comprises an ordered collection of rules (LeBlanc, c 6, I 14-32); capturing an imprecise input (LeBlanc, c 6, I 14-32); processing the imprecise input to determine a magnitude of participation of the input in the rules (LeBlanc, c 6, I 34-48); applying the rules to the imprecise input based on the magnitude of participation to produce a logical product (LeBlanc, c 27, I 42-60); and computing a refined location based on the logical product (LeBlanc, c 27, I 42-60); Examiner's Note (EN): para 2 above applies; LeBlanc involves computer implemented analysis (i.e. c 13, I 22-41)

Similarly, prior dependent claims 6-8, 20-22, and 34-36 were rejected as follows:

Claims 6, 20, 34.

LeBlanc anticipates the imprecise input is location (LeBlanc, c 27, I 42-60; EN: location is the 40th floor).

Claims 7, 21, 35.

LeBlanc anticipates the imprecise input is activity profile based (LeBlanc, c 27, l 42-60; EN: para 2 applies; voice activity).

Claims 8, 22, 36.

LeBlanc anticipates the imprecise input is temporal (LeBlanc, c 16, l 27-38; EN: para 2 applies; radio frequency is time dependent).

Applicant traverses the above rejections. Specifically, LeBlanc does not teach, disclose or suggest an imprecise input that is based on a proximity to a particular user identified location, a similarity between a current user's activity and a particular established activity profile, or whether a current time is within a particular temporal range or temporal profile;

Independent claims 1, 15, and 29 are generally directed to refining an approximate location of a device. An approximate location of a device is obtained. Thereafter, fuzzy logic is used to refine the location. First, a rule based is obtained. Imprecise input relating to the location of the device is then obtained. Applicant has amended the independent claims to incorporate some of the limitations of claims 6-8, 20-22, and 34-36 respectively. In this regard, the imprecise input may be based on at least one of three various criteria: (1) a proximity to a particular user identified location; (2) a similarity between a current user's activity and a particular established activity profile; or (3) whether a current time is within a particular temporal range or temporal profile. The imprecise input is then processed wherein it is determined how much (i.e., the magnitude) each input participates in the rules (of the rule set). The rules are then applied to the imprecise input based on the magnitude of participation. The rules are applied by producing a logical product. Based on the logical product, a refined location is obtained.

The cited references do not teach nor suggest these various elements of Applicant's independent claims.

LeBlanc merely describes a location system for commercial wireless telecommunication infrastructures (CMRRs). LeBlanc's system is an end-to-end solution having one or more location systems for outputting requested locations of commercially available hand sets or mobile stations (not shown) based on, e.g. AMPS, NAMPS, CDMA or TDMA communication standards, for processing both local mobile station location requests and more global mobile station location requests via, e.g., Internet communication between a distributed network of location systems. LeBlanc's system uses a plurality of mobile station locating technologies including those based on: two-way TOA and TDOA; home base stations and distributed antenna provisioning. Further,

LeBlanc's system can be modularly configured for use in location signaling environments ranging from urban, dense urban, suburban, rural, mountain to low traffic or isolated roadways.

Accordingly, the system is useful for 911 emergency calls, tracking, routing, people and animal location including applications for confinement to and from certain areas.

The original dependent claims 6-8, 20-22, and 34-36 provide for various definitions of the imprecise input. The three different types of imprecise input from these claims have been incorporated into the independent claims. In addition, clarification regarding the types of input have also been incorporated.

In rejecting original claim 6, the Office Action provided that LeBlanc's 40th floor met the limitations of the location imprecise input. The independent claims have now provided that the imprecise input is based on a proximity to a particular user identified location. In other words, the locational imprecise input is based on how close the current user is to a particular user specified/identified location. New dependent claims 43-48 further elaborate on examples of such a user identified location. In this regard, the user identified location may be a user identified favorite location of the user or a recently visited location of the current user. Such a user identified location is clearly different from LeBlanc's location that is merely based on wireless location signals received representing distributed antennas across building floor boundaries being received from a specific floor on a multi-storied building (see col. 27, lines 13-16). In this regard, LeBlanc completely fails to based imprecise input on a user-identified location. Instead, LeBlanc's location (i.e., the 40th floor) is not user specified at all. Nor does LeBlanc's location have any relationship to a user's favorite location or a previously visited location of a user. Thus, LeBlanc's location is based on the strength or weakness of signals from antennas on various floors of a building. Accordingly, inapposite from the present claims, LeBlanc's location is not determined or evaluated with respect to a particular user based input. Accordingly, LeBlanc fails to teach this aspect of the invention.

The second type of imprecise input in the amended claims provides for a similarity between a current user's activity and a particular established activity profile. In rejecting original claims, 7, 21, and 35, the Office Action refers to col. 27, lines 42-60 referring to a voice activity. However, contrary to the present claims, voice activity has nothing to do with a particular established activity profile of a user or a comparison between a current user's activity and such a profile. In this regard, the claims specifically provide for and recite the terms "activity profile". Under MPEP §2142 and

2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." In this regard, the term "activity profile" cannot merely be ignored. Firstly, the cited portion does not mention or refer to "voice activity" at all. Instead, the terms "voice activity" are used in col. 16, line 42. Secondly, the monitoring of voice activity does not even remotely suggest that the voice activity has a particular profile or a comparison of a current user's activity to such an established profile (as claimed). LeBlanc provides for isolation by monitoring voice activity. Again, there is no teaching, suggestion, or description, implicit or explicit, of a profile, an activity profile, or a comparison of a current user's activity to such a profile.

The third type of imprecise input in the amended claims provides for whether the current time is within a particular temporal range or temporal profile. In rejecting original claims 8, 22, and 36, the Office Action merely recites col. 16, lines 27-38 and states that radio frequency is time dependent. Applicant notes that while the frequency of a radio signal has a time aspect, such a teaching is significantly distinguishable from comparing a current time to a particular temporal range or profile. In this regard, there is not even a remote similarity between the teaching of LeBlanc and the amended claims.

Thus, Applicant submits that independent claims 1, 15, and 29 are allowable over LeBlanc. Further, dependent claims 2-5, 9-14, 16-19, 23-28, 30-33, 37-51 are submitted to be allowable over LeBlanc in the same manner, because they are dependent on independent claims 1, 15, and 29, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-5, 9-14, 16-19, 23-28, 30-33, 37-51 recite additional novel elements not shown by LeBlanc.

V. Conclusion

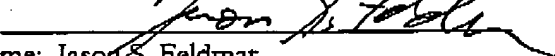
In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

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